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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,348	10/07/2003	Liang-Ying Huang	HUAN3219/EM	3853
23364	7590	03/24/2006	EXAMINER	
BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314			LEE, EDMUND H	
			ART UNIT	PAPER NUMBER
			1732	

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

CM

<b>Office Action Summary</b>	<b>Application No.</b> 10/679,348	<b>Applicant(s)</b> HUANG ET AL	
	<b>Examiner</b> EDMUND H. LEE	<b>Art Unit</b> 1732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

1. Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The word "groove" (cl 1, ln 7; cl 5, ln 4; cl 8, ln 7) is indefinite because it should be --grooves--.

The phrase "jetting the black... a black photo-resist" (cl 1, lns 9-11) is indefinite because its relationship to the other steps of the claim is unclear. If this step is related to the other steps of the claim, then it should be clearly and positively recited as such.

The phrase "the black photo-resist" (cl 1, ln 9) lacks antecedent basis in the claim.

The phrase "the inkjet printing method" (cl 1, lns 9-10) lacks antecedent basis in the claim.

The phrase "the pre-set groove" (cl 5, ln 3) lacks antecedent basis in the claim.

The phrase "the bottom plastic substrate" (cl 5, lns 3-4) lacks antecedent basis in the claim.

Claim 5 is indefinite because the phrase "[T]he position... staggered" does not appear to be a part of claim but is at the end of the claim.

Correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 8-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Atkins (USPN 5399390). Atkins teaches the claimed process as evidenced at col 2, Ins 24-30 and 35-41; col 3, Ins 30-35, 40-55, and 61-68; col 4, Ins 13-25 and 49-56; and figs 2-4.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Atkins (USPN 5399390) in view of Moshrefzadeh et al (USPN 6077560) and Nakahara et al (US 2004/0004691). In regard to claim 1, Atkins teaches the basic claimed process including a method of making a color filter (col 2, Ins 24-30 and 35-41; col 3, Ins 30-35, 40-55, and 61-68; col 4, Ins 13-25 and 49-56; and figs 2-4); providing a plastic substrate with an extrusion method, the substrate having a multiple grooves with at least one surface containing photo-resists (col 2, Ins 24-30 and 35-41; col 3, Ins 30-35, 40-55, and 61-68; col 4, Ins 13-25 and 49-56; and figs 2-4); filling the primary colors for red, green, and blue into the groove by jetting (col 2, Ins 24-30 and 35-41; col 3, Ins 30-35, 40-55, and 61-68; col 4, Ins 13-25 and 49-56; and figs 2-4); and covering a plane passivation layer on the top surface of the substrate (col 2, Ins 24-30 and 35-41; col 3,

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Ins 30-35, 40-55, and 61-68; col 4, Ins 13-25 and 49-56; and figs 2-4). Atkins, however, does not teach jetting black photo-resist liquids by an inkjet printing method.

Moshrefzadeh et al teach a method of molding a color filter for an LCD; and depositing black photo-resists onto a plastic substrate, which has multiple grooves therein (col 9, Ins 12-25; fig 2g). Nakahara teach a method of molding a color filter for an LCD; and inkjet printing a resist onto a substrate (paragraph 0060). Nakahara also teaches that inkjet printing and depositing are substitutable alternatives for forming a resist (paragraph 0060). Atkins, Moshrefzadeh et al, and Nakahara are combinable because they are analogous with respect to liquid crystal displays. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to jet by inkjet printing a black photo-resist as taught by Moshrefzadeh et al and Nakahara in the process of Atkins in order to produce a color filter having high quality. In regard to claims 2-3, such are taught by Atkins (col 2, Ins 24-30 and 35-41; col 3, Ins 30-35, 40-55, and 61-68; col 4, Ins 13-25 and 49-56; and figs 2-4). In regard to claims 4-5, such are taught by the above combination of Atkins, Moshrefzadeh et al, and Nakahara. In regard to claim 6, such is a mere obvious matter of choice dependent on the desired final product and of little patentable consequence to the claimed process since it is not a manipulative feature or step of the claimed process. Further, the claimed design is well-known in the color filter art. Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the claimed design in the process of Atkins in order to form a diverse product. In regard to claim 7, such is taught by Atkins

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(col 2, lns 24-30 and 35-41; col 3, lns 30-35, 40-55, and 61-68; col 4, lns 13-25 and 49-56; and figs 2-4).

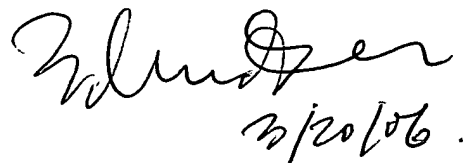
6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to EDMUND H. LEE whose telephone number is 571.272.1204. The examiner can normally be reached on MONDAY-THURSDAY FROM 9AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571.272.1196. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

EDMUND H. LEE  
Primary Examiner  
Art Unit 1732

EHL



3/20/06